

ALMOST ORGANIC

Green Gardening Tips for the Practical Gardener

DON EVANS



Almost Organic:

Green Gardening Tips for the Practical Gardener

By Don Evans

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Introduction

So you've picked up this gardening book written by this Gardening Don guy, whom you assume is a leading gardening expert with endless credentials, certainly a degree in horticulture and probably a lifetime of tending his perfectly manicured and landscaped award-winning garden.

Well, not quite. Actually, none of the above. I am Don, though, and you can find out a bit more about me here.

In my Gardening with Don series, I help you take the frustration out of gardening and landscaping. If you find you're spending more time on your lawn and garden with less to show for it, then you'll benefit from the advice in this book. Don (that's me) is an agricultural marketing specialist turned minimalist when it comes to using chemicals around your home and garden.

This series includes great tips for:

- having a good-looking lawn with minimal upkeep, using nontoxic methods
- keeping insects away with little or no insecticide use
- how to reduce your herbicide use without being overrun by weeds
- when to renew and when to redo
- understanding the numbers on the fertilizer bag

In this book you'll find a happy middle ground between the purist organic approach and the overuse of fertilizers, pesticides and herbicides, plus recycling awareness and more. Give yourself the freedom to sit back and enjoy your lawn and garden with this "less is more" approach.

About the Author

I admit I've always been just a little skeptical of "green gardening practices," especially since I chose a career in agriculture, an industry that has been vilified as pretty much the opposite of anything "green."

Thankfully, over the years many of us have become a lot smarter in the way we look at what we're feeding ourselves and putting on our lawns. I've found great success in my gardening efforts by questioning

some of the old methods, evaluating some of the new, and then finding a mixture of the best of each as being the way to go.

I'm really just a guy who enjoys some of the simple things in life, one of them being gardening, and I'd like to share some of the learning, experiences, and opinions I have picked up over the years. I've found that over time, different experiences have changed some of those opinions, and I'm certainly not afraid of adapting my thinking or my actions when they make sense to me.

I'm happily married to the other half of the "Point and Plant" team - as our daughter says, Mom points and Dad plants! I'm young enough to still be working, old enough to wish I weren't. I'm wise enough to know that when the Point half says "when is your next haircut appointment?", the Plant half knows she really means "your eyebrows are growing wild and you need them trimmed!".

And yes, many green ideas do make sense to me. Allow me to share five such ideas that are simple, sensible, implementable by anyone, don't require special equipment and don't cost a lot of money.

- Conserving water
- Love those bugs
- Hold the herbicide
- Sometimes new is not better
- Know your stuff, (fertilizer stuff that is)

Meet Herb

OK, enough about me.

Meet my friend Herb. Herb and I have been friends and neighbors for years, and we have a common interest in gardening. Many summer evenings are spent having a cool brew at each other's places, with the inevitable discussion on our different gardening methods.

Unlike me, Herb is a perfectionist. Sometimes he's so darn perfect it's a bit annoying, even, but all that aside we've been good friends for years, even though we're constantly trying to outdo each other.

I guess Herb is the perfect greenie, but I really don't think he knows it. He certainly isn't very outspoken; he just does things around the garden differently than I did. Note that I said "did"!

Things like weed control in lawns, insect control in plants and even something as simple as watering his flower pots, lawns and garden areas are some issues in which my approach has evolved. Remember, I grew up in a world of chemicals, so I'd think nothing of hauling out a sprayer, mixing up a potent brew and spraying the lawn from border to border. Now I have to admit, I was pretty proud of my dandelion free lawn, which was a rich dark green from the copious dressings of artificial fertilizer I bestowed on it (remember I sold that stuff, so it came pretty cheap) and my perfectly trimmed, insect free cotoneaster hedges that lined the driveway.

But you know what? Herb's hedges had no bugs, his lawn was pretty lush and I'd never seen a dandelion in his yard.

So what did he do differently?

Conserving Water

Watering Lawns

One thing we differed on was watering our gardens and lawns. We live in a somewhat arid climate, and though we at times get adequate rainfall to maintain a lawn, usually come August it's browning off. I was always into tinkering with gadgets and devices that I'd thought would make my life simpler.

Take lawn watering, for example. I had rigged up an elaborate system of sprinklers, hoses and timers, and that lawn got doused daily, whether it needed it or not, as that's how the timers were set. I hate to admit it, but I can recall driving home and see the sprinkler rotating away, with the sidewalk literally running with my water.

Herb rarely watered his lawns, yet his lawns were just as lush, and in fact they tolerated the heat better than mine did.

The Two Ah-ha's

It seems a big factor in how much water I was using, and how little he was, was actually twofold.

Did you know you can actually "train" a lawn into requiring more and more watering? It's true, and it makes perfect sense when you think it through. By setting up the timer to switch on every day and water the same amount, regardless of the conditions, your lawn has no reason to send its roots into the deeper subsoil zones, areas that will still be retaining moisture during a dry period. After all, you're giving them a daily drink, so why should they? They can get all the water they need, right at the surface!

Much better to use alternative methods for water retention while using the sprinkler infrequently and only when absolutely necessary, thus training your lawn to somewhat look after itself.

Ah-ha # 1 - Raise the blade, ditch the bag and to hell with what the neighbors think.

Sure it's nice to see a closely trimmed lawn, recently cut in an exact pattern, with every blade of cuttings collected and bagged (and hopefully composted). Thanks to Herb, I've learned the wisdom of raising the blade at least one or two notches on the mower, leaving a solid couple of inches of grass length. Now I still cut it just as frequently as I used to, but rather than scalping the lawn and exposing the root mass to the burning sun, I'm simply topping the grass with each mowing.

Ditching the collection bag was hard to do, but oh so worth it. Remember, I'm still mowing as often as I used to, but now I'm simply driving the clippings into the lawn's thatch. With regular mowing, you'll never get unsightly clumping of clippings; indeed the clippings are so small they literally disappear!

Of course there are times that the bag comes out again, so don't ditch the bag literally! Spring is a season of great growth in our part of the world, and in spring it can rain - and rain and rain - and that lovely lawn just keeps on growing, no matter if it rains for a day or a week. Having a collecting bag for the clippings will avoid leaving unsightly clumps of clippings that not only look messy, but can do some serious

damage to a nice lawn by simply suffocating it. Come midsummer though, the lawns are maturing a little, and the rains are a little less frequent.

As to be expected, Herb and I differ a little on our lawn mowing techniques, but we both agree on the premise of returning the clippings to the soil. Herb is the proud owner of a very expensive "mulching mower," a model with two blades that really does a great job of turning the clippings into a true mulch. However I don't think you need expensive mulching mowers or the like. Rather, you just need some regularity in your mowings. At the end of the day I don't see a lot of difference.

These clippings are really nature's perfect lawn food; they act as a mulch, they return valuable organic matter back to the soil, they foster an environment that holds moisture, they make it difficult for weeds to establish themselves and the list goes on. In fact, they act as a perfect soil conditioner.

Speaking of soil conditioners...

Ah-ha # 2 - Treat the soil and the soil will look after the lawn!

Allow me to introduce you to Zeolite. Zeolite is a naturally occurring mineral that is found in many places in the world and has just as many uses. They include odor absorption (think kitty litter), medicinal uses, water purification and more. It's even used in the nuclear industry for filtering nuclear wastes.

Wikipedia can explain its virtues better than I can - <http://en.wikipedia.org/wiki/Zeolite>

However, as Herb taught me, it's also a wonderful soil conditioner. Here's the "Reader's Digest version" of its attributes for our purposes:

- You can use it on existing lawns or prior to establishment, by simply broadcasting with a fertilizer spreader, or even by hand. Being a granular shape, lightweight and very porous, it's easy to spread, and not being a fertilizer per se, there are no worries of unsightly stripping due to an uneven spreading.
- It won't burn your precious lawn's roots or leaves. Again, it's not a fertilizer.
- If, however, you have used a fertilizer, it's absorbing properties

will help bind fertilizer from any runoff caused by watering or excessive rainfall, effectively mimicking a "slow release" type of fertilizer. The fertilizer gases will actually get absorbed into the Zeolite particles and be released over time.

- Again, for fertilizer users, Zeolite will reduce any environmental damage caused by unwanted leaching of added nutrients. Rather than the nutrients running down the gutter, they're effectively trapped in the root zone of the plants, exactly where they're needed.
- When applied in a granular form, Zeolite is perfectly sized to improve soil aeration, critical in allowing lawn roots to "breathe" easily.
- But most important is its ability to absorb water, then hold that moisture, thus increasing the soil moisture level in the critical root zone. As the soil dries out, you'll have a hidden reservoir of tiny particles ready to release a slow "drink" to thirsty roots.
- Over time, Zeolite can improve your soil to such a degree that you'll need less and less fertilizer to maintain the health of your lawn. (Even though I sell fertilizer, I still think this is a good thing!)
- Owners of lovable "she dogs" (saying b**** still is a struggle for me!) will love this. Zeolite is really good at absorbing the dump of urine when Lady pees, and like fertilizer, will release it over time, thus really reducing the severity of those horrible brown pee patches that are the telltale sign that a she dog lives here.

Zeolite is readily available in any good gardening center. My lawn and garden areas were treated with a heavy dose some years ago, and they now get an annual maintenance dressing, plus a lighter application each fall. Now that I've had a few years of returning lawn clippings to the soil, (and liberal applications of Zeolite), it is amazing how the lawn's health has improved, and how well it tolerates a prolonged dry spell.

Applying the Zeolite is dead easy as well. It comes in easy to handle bags that are the perfect size to drop into our [Earthway Fertilizer Spreader](#). I always apply it in the fall, and now that I have a lawn with a robust thatch (thanks to ditching the mower bag), I would never even know I've made an application. It seems to trickle through the thatch and somehow disappears into the soil over the winter months.

A very welcome additional benefit is that a healthy lawn makes a really difficult environment for certain weeds to establish themselves in. Dandelions in particular seem to never have a chance!

Watering plants

We live in an area with a very short growing season, where we're blessed with long days, usually adequate rainfall, and temperate summer temperatures. However, that season is SHORT - maybe four months tops. The other eight months we're looking at ugly snowbanks, lifeless trees, and solidly frozen soils. It's a real treat to hit the garden in spring, and we usually try to squeeze in every opportunity to enhance our outdoor living areas with any bit of color and growth we can. Hanging baskets are a perennial favorite, as are flower towers, freestanding pots, and indeed any container type of arrangement.



As attractive as these are, they do require constant watering to keep them looking their best. I had always just taken the easy way: turn on the hose and water away. One year I even devised an elaborate system of timers, hoses and drip nozzles, (remember, I'm the gadget guy) that started at precisely the same time every day and dripped the precise amount into every basket. Precisely.

The trouble was not every plant needed that amount. Some days Mother Nature did the watering, and as the season progressed and the plants grew, their water requirements also grew. But I was still precisely dispensing the "precise" amount! Some baskets were

drowning, while others were barely getting their needs met.

Additionally we're on a town water system where the water quality leaves a lot to be desired, and my daily waterings simply overloaded the baskets' soil with unwanted bicarbonates and trace elements. Over time you'd see the plants deteriorating despite whatever watering I gave them.

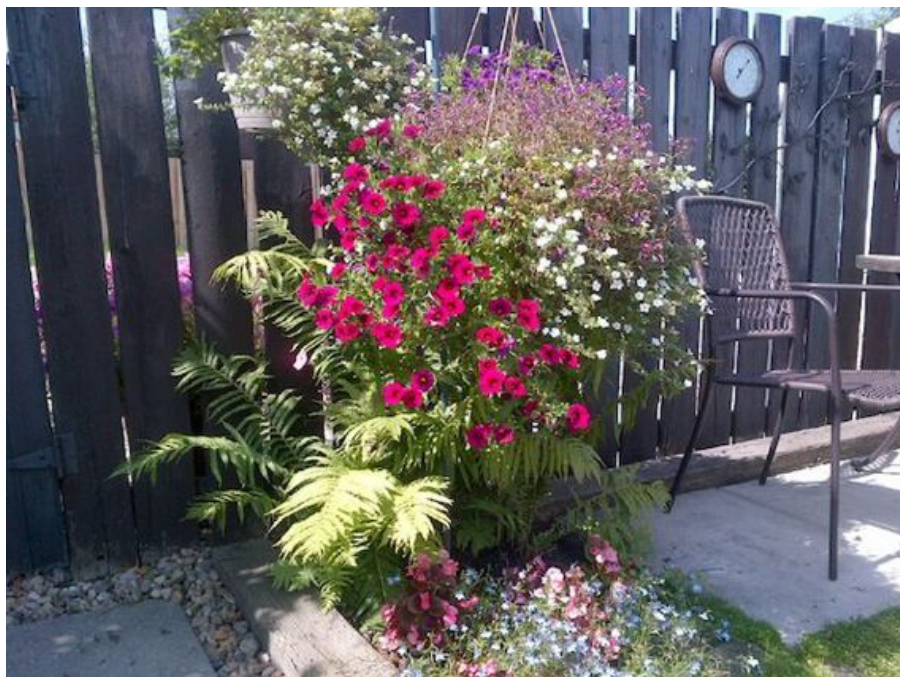
I shouldn't forget the eyes rolling look from the Point half of the team, either when I proudly returned with my truck full of gadgets and timers and a smoking credit card. You know, the look that says "What did you bring home THIS time, and HOW much did it cost?"

I know that look well!

Enter Herb...

Herb never uses a hose. He never waters from a tap. He never devises any elaborate automatic irrigation schemes. He doesn't even own a fancy watering can! He simply waters by hand using a bucket and a dipper, and he waters with rainwater - pure unadulterated rainwater. No chlorine, no fluoride, nothing added.

And his plants flourish. Brilliant colors, extraordinary growth, blooms that last and last, in fact right until mother nature heralds winter with a sudden heavy frost.



Herb has never had a huge water bill like I had. He never wastes a valuable resource. And his daily waterings are about the same duration of time that mine were. He simply does it better...or did, until I caught on to his secret!

Collecting rainwater

Now I acknowledge that that not everyone will be able to do this, but for most areas that get a somewhat reliable rainfall each year, this is very doable, and it doesn't need to cost a fortune. Indeed my entire rain gathering system was constructed of used material I picked up for nothing. Put together properly, the system can look great.

We have an unattached garage in our backyard, that is roughly 4.5 feet (1.5 meters) from the property line, and this was always a shady unattractive area that was really just a weed trap and not much use for anything. However this side yard makes a GREAT place to construct a rain collection system. It doesn't need to be elaborate, just functional, and either somewhat hidden, or easily disguised with some creeping growth - perhaps a clematis or maybe some ivy.



Remember I'm in the agricultural chemical business? It was pretty easy to score some used plastic 45 gallon (200 liter) drums, that after a thorough cleaning, were lined up in a row with the first elevated slightly from the next, and so on down the line. It was easy to divert the down spouting from the garage's eavestrough to an opening in Drum #1. Then each drum was connected to the next one by means of a piece of plastic piping from the bottom of one to the bottom of the

next. I have six drums hooked together this way, with the last being my "dispensing drum," the one I take the rainwater from each time I'm watering. All the drums are sitting upright. The dispensing method is simply one of the plastic spigots that came with each drum, and the drum is elevated enough that it's easy to get a watering can under the spigot.

Additionally, I have rigged a small electric pump with some quick couplers, so when I want to water the flower gardens with a hose, it's easily done.

Easy-peazy, fully functional and hidden away behind the garage, my system is no detriment to the appearance of my back yard. Of course there are many commercially available rainwater tanks available for purchase, most of which are attractive and equally functional. But they cost! I guess I'm just cheap, so I like to make do with what's available. (Maybe I am a bit of a greenie and just don't realize it!)

Want to build a rainwater watering system? Items you'll need:

Must Haves

- 6 Used Plastic Barrels - each about 45 gallons or 200 liters
- 1 small piece of downspouting to channel the roof water to the first barrel
- 6 1 inch plastic tee / hose couplers
- 1 plastic tap for dispensing
- A solid surface to hold the barrels.

Nice to Haves

- a small electric pump
- a length of good rubber hose, either 5/8" or 1/2"
- a good shutoff valve for the hose
- an adjustable watering shower head for the hose

Watering is now a pleasure - honest!

The task of the daily watering has actually become an anticipated pleasure now. You rapidly learn that each hanging basket has different water requirements, depending on the plants used, the foliage, and the stage of their growth. Certainly, not every pot or basket needs or gets the same quantity of water; instead you learn to customize the amount to each. When you "hang up the hose," you'll also find that you use way less water on your daily waterings, as it's so easy to overdo it

when you have an unlimited amount at your fingertips.

Your plants simply don't need to be watered to the point of saturation.

They will thrive with being fed rainwater, no chlorine, no added components that plants don't need, and quite importantly I believe, they'll receive their watering at a warmer temperature than icy cold water from your main's system. In fact, my drums have been painted black, and now they really absorb the heat from the sun, resulting in almost tepid water temperatures - perfect for watering with no "shock"factor.

Keeping the plants going and going

Though I'm leaning toward more "natural fertility"for my plants, certain species simply need an additional boost. Take hybrid petunias for example, often sold under the Proven Winners label. If you have baskets of these and don't give them a daily dose of a fertilizer, you'll find them petering out before the season has ended. However, give them a very weak, daily feeding with a balanced, [soluble fertilizer](#)and they just keep on going and going and going. Just like the Bunny!

Hand watering with rainwater gives you the ability to customize not only the quantity but also the quality (straight water or spiked with fertilizer) for each unique pot or basket.

Watering time for me is a time of peace and solitude, something sorely missing in my daily life of people and noise. Early mornings or late evenings are best for me, sometimes plugged into an Ipod, but more often just me and the beauty of my backyard.

Thanks Herb..

Good Bugs - Bad Bugs

We have a hedge bordering the yard, a well established stand of a good old standby, cotoneaster. Now, cotoneaster makes a great hedge, but it has a tendency to attract some nasty little predator visitors, among them pear slugs.

I used to give the hedges an annual midsummer treatment by spraying with a very common insecticide, Malathion, which would eliminate the little nasties for the remainder of the summer. However, I always felt a little bad in doing it, as I was never sure where the dead bugs ended up. Hopefully they simply died and shrivelled into the soil, but what if they became a meal for the birds I spent so much time attracting to my yard? What effect would the spray residue have on them?

Enter Herb again. Cotoneaster hedges all around his yard, thick green foliage, healthy as you've ever seen, not a bug in sight, and no, he never sprays any insecticides. It seems years ago, one fall, Herb missed cleaning up the leaf residue from the birches, weeping willows and mountain ash that grace his yard. The winter's winds blew the leaves around until a thick layer became trapped around the base of the cotoneaster hedge row.

Come spring, when he finally got a chance to clear the leaves up, he observed that among the partially rotted leaves were the most ladybugs he'd ever seen. It seems the decomposing leaves were the perfect habitat for them to winter over and they greeted spring in amazing numbers.

No big deal, right? Ladybugs are just ladybugs!

Wrong! It seems Ladybugs have a voracious appetite, and one of their favorite foods happens to be the pear slugs that plagued his cotoneasters. They're also partial to aphids, aphid larvae, the different scale type of insects, and indeed most soft bellied insects are on their menu.

That summer, as I was performing my annual cotoneaster drenching with Malathion, Herb was quietly determining there was no need to in his yard. The pear slug infestation was no more. Gone, simply vanished.

The difference were the ladybugs and to this day there has been no more insecticide used in my hedge!

Making a hospitable environment for the good bugs

It's been pretty easy really to make an environment that ladybugs, (or the now quite common Asian lady beetle) thrive in; virtually every yard has all you need. Rather than cleaning out the leaves and plant residue each fall, then bagging and removing it all as I used to, now a good percentage is simply gathered and placed around the base of my hedge rows, under trees, in flowerbeds, and on the vegetable garden.

I just layer a 3-4 inch cover, get it good and damp with a thorough sprinkling, maybe throw some chicken wire or plastic mesh over spots that are exposed to the winds and then let Mother Nature take its course. The dampened leaf mulch will partially decompose and become the perfect home to our ladybug friends.

Every spring is the same: ladybugs galore, but none of the nasties!

Another observation I've had since discontinuing insecticide spraying is we seem to have a larger number of small birds, chickadees, finches and the like wintering over. I'll often see them busy foraging and picking away right amidst the cotoneaster rows. Though I don't know for certain, I'd bet they're cleaning up any insect larvae and such that made it past the ladybugs!

Did you know that the use of beneficial bugs to prey on "bad bugs" is quite prevalent in the greenhouse industry? Growers are realizing up to a 70 percent reduction in insecticide use, simply by releasing "good bugs" into a greenhouse containing an infestation of an undesirable species.

Reduce Pesticide Usage

First a quick lesson...

Do you understand the various terms used to describe pesticides? Often confused, commonly misunderstood, it's really quite simple.

A pesticide is a general term that focuses on pests in general. These are usually one of three subsets:

- Herbicide - Controls "herbage" or vegetation, commonly called weed sprays.
- Insecticide - You guessed it, specifically controls insects.
- Fungicide - Controls diseases. Think fungus, molds, mildews and the like.

Told you it was simple!

Depending on where you live, this may not pertain to you, as many municipalities have recently banned the use of herbicides. I believe most of these decisions were made more on emotion than fact, and our backyards, parks and green areas are so much the worse for it.

I'd much rather see the effort spent enforcing a blanket ban instead being spent in either educating the public in the safe use of all pesticides, especially herbicides, or at worst eliminating their use by the general public, but allowing their use by registered, thoroughly trained professional applicators.

However, if you're fortunate enough to live in a jurisdiction that still allows you to use herbicides, for goodness sake use some common sense, (and make sure you thank your local elected official.)

- Do whatever you can to negate the need for applying herbicides. Create a healthy lawn that discourages the establishment of weeds, as discussed previously.
- If you have to use them, then be sensible in how you handle them. Don't start spraying in shorts and flip flops. Don't laugh - I've seen it done many times. Learn the appropriate safety measures. Practice some common sense.
- Read the label. It's there for a reason. It has everything you need to know to learn how to handle the chemical properly, from mixing to the actual use.

- Mix the appropriate amount. Take the time to measure it correctly. This is not the time for "a glug or two"!

Dandelions - my #1 tip for effective weed removal with herbicides.

I'll preempt this statement by reiterating that there are good alternative methods to eliminating dandelions from your lawn, and a healthy lawn is a big start. Simply spot weeding, either with a herbicide, or by mechanically removing the weed and root system with a specially designed tool, is a much better alternative to blanket spraying your entire lawn area.

However, there are times that spot weeding simply isn't viable. Maybe you struggle with bending or being on your hands and knees, or perhaps your lawn area is simply too big for effective hand weeding. At times like these, a complete spraying with an herbicide may be required.

It's all in the timing.

Don't spray in the spring!

Though it's tempting to spray when the weed is most visible, say on a bright sunny spring day, there's a much better time to do it. And that time is fall, as late as possible before dormancy sets in, or in our case just before freeze up. And I mean really late - try and time your application to be just days before winter sets in.

Spray with the good stuff.

Take the time to acquire a quality herbicide. Look for a "3-way" mix of components. These will be on the label as something like:

2,4-D (isomer specific)	190 g/L
Mecoprop (d-isomer)	100 g/L
Dicamba	18 g/L

These components complement each other and do a much more effective job of killing the weed than any one would by itself.

Why fall?

Well, if you time it right, the dandelion plants will also be preparing for winter, and will be actively feeding their root systems with as much as they can to prepare themselves for winter's dormancy. It's kind of like a bear gorging on berries just before hibernation. By applying a proven, high performing herbicide at that time, the plant will rapidly translocate the active ingredient deep into the root system where it'll do it's job of killing extremely effectively.

Compare this to spraying in spring or summer when the plant is actively producing as much top growth as possible, with little or no energy directed at its roots, and it makes sense that fall is the time to apply!

The ultimate aim is to get as much active ingredient as possible to where it can do the most good, that being the root system, while at the same time using the least amount of a herbicide as we can.

Next spring you'll be amazed at how dandelion free your lawn will be. In fact, if you're actively growing a healthy lawn with the best practices previously outlined, it's highly likely that you'll completely clean up your lawn with just this one application.

Though I applaud people's efforts to be herbicide free, I do know there are times when they are a necessary evil. I believe that with the right understanding, the right safety procedures, the right motives and the right herbicide and timing, there is a place for them.

Used wisely, less can be more!

New is Not Necessarily Better

Let me illustrate what I mean here with a story that occurred just last winter.

When doing my annual fall cleanup in the garden last year, I came across a couple of pretty decrepit looking bird houses that had been nailed to the trunk of a couple of apple trees in the back yard. I actually took a critical look at these old houses and determined that yes, they'd had their day, served their purpose and were ready for the scrap heap.

Rustic and weathered, a bit crooked and lopsided, any remains of paint long gone, they really didn't do too much to enhance the decor of the yard.

Or did they?

Dad, do you know how to build a birdhouse?

I got thinking of the origins of these old handmade bird houses and recalled that almost a quarter of a century ago, my six year old twin sons came bouncing home from school, shouting, "Dad, do you know **how to build a birdhouse?**" It seems their class at school was doing a project on birds, and the teacher had suggested the kids enlist their parents in a home project and help them in building a birdhouse to round out the bird project.

Now, this was long before the days of the internet and Google, so getting bird house plans was a bit of a feat, but the teacher wisely dug up some birdhouse plans, photocopied them and sent a set home with each kid that needed them. Being the total nonpractical guy I am, I sure needed them.

I recall the better part of a Saturday was spent with the boys working on this project. There was a trip to the lumber yard to buy some plywood, a pint of paint, a hole saw attachment for my drill, etc., and then some very pleasant hours measuring, cutting, gluing, nailing and painting as we worked toward our finished product: a couple of very basic, generic style bird houses.

Paint all over the garage, crooked cuts, wrong measurements and a couple of squabbles all enhance the memories.

These were proudly taken to school for a "show and tell" session and then were nailed to the tree trunk with great expectations that spring. Sure enough, they did their job and a succession of birds filled them with twigs and made their home there. In fact there's been many a sparrow emerge from its egg in those old bird houses.



The Memories

I took a look at them today, dumped on the corner of the deck after I forgot to trash them last fall, now that we're in our winter season, covered in snow, and definitely showing their age.

Ready for the trash? Probably.

Will they get scrapped? Not a chance!

You see, some things are too precious to throw away, and one of these was memories of some good times with a couple of little guys as they "helped" their dad build a bird house. They can be literally rotted and disintegrating entirely but I'm sure I'll be finding a way to get them back up in the old apple trees next spring.

This story illustrates to me another way we can be a little greener in our gardens by simply being our own recyclers. Not everything needs to be thrown away just because it's getting a little older (and at my

age I'm pretty glad of that!), but if we believe "new is not always better," then many items that would normally be on the scrap heap can actually be recycled right in our own backyard.

Understanding Lawn Fertilizer

For when the natural methods need a little help

Have you ever driven by a neighbors' place and been amazed by the brilliant green of their lawn, whereas other lawns in the area are not showing up as well? Maybe a little yellow color is showing, even browning off in places. What could be the difference? What is the one guy doing that the other one isn't?

Well, without knowing exactly the individual circumstances, I would venture to guess that "Mr. Green" was using copious quantities of two things, namely fertilizer and water. He's almost certainly broadcasting liberal amounts of a granular fertilizer.

The water is pretty self-explanatory, but what about fertilizer? I'm sure you've wandered around your local greenhouse and seen the array of fertilizers for sale, along with extravagant promises and pictures of manicured lawns. And what do all those numbers on the bags mean?

Let me simplify it all for you.

There are basically two types of fertilizers.

- **The Organic Type** - This is found in decaying plant material, such as compost and animal manure.
- **Manufactured Fertilizer** - This is the type you'll most often see in stores, usually in a granular form, but sometimes a liquid, and will always be labelled with three numbers, e.g. 10-10-10.

For now I'll concentrate on explaining the mystery of the basic elements of manufactured fertilizer, and in particular what those confusing numbers mean, and what you should be looking for when making a purchase of fertilizer that you can easily apply to get your lawn looking as good as "Mr. Green" up the street.

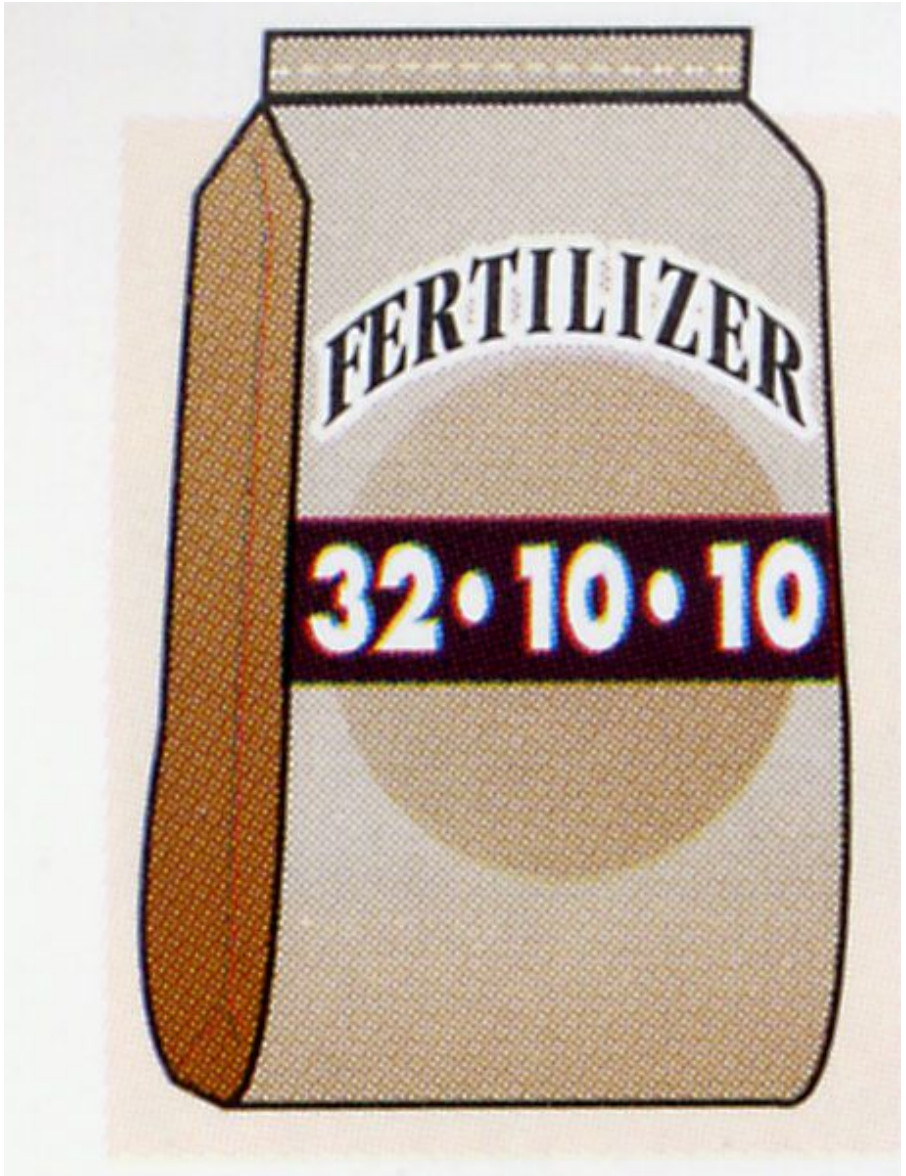
All fertilizers contain the same elements, or numbers, but the organic type is a whole different scenario, and best left to someone more knowledgeable in them than I am.

First the numbers, the "N-P-K"

Every manufactured fertilizer contains three basic elements, and each is essential to the proper growth of all plant life. Most organic types also contain some of these, but not necessarily all. This is known as the N-P-K analysis of the product, and is always expressed in that order. Each element is different and serves as a building block in the foundation of the plant's growth.

What do they stand for and what do they do?

- **N** is for nitrogen
- **P** is for phosphorous
- **K** is for potassium



Nitrogen

The "N" in the N-P-K is always the first of the three numbers.

Nitrogen is an essential macronutrient for growth, especially for producing the vivid green that is so prized, and species such as grasses (as in your lawn) are voracious users of N, and require heavy feeding throughout the growing season. In commercially manufactured fertilizer, there are generally two distinct types of nitrogen forms.

Nitrate Form

This is the form that is most quickly absorbed and utilized by plants, but because of this ability to be rapidly absorbed, it will also be rapidly leached, or washed through the soil profile. It's commonly called a "quick release form."

Ammonium Form

This is the form that tightly attaches itself, or bonds, to the soil particles, making it much more stable and lasting. Because of this bonding, this form of N moves to the plant's root system much more slowly and serves to feed the plant over a much longer period of time. Yes, it's also called the "slow release" form.

You actually need both forms of N to keep a lawn lush and green over a growing season, and though it's possible to achieve this by alternating applications of each, I've always found it better to broadcast a blend of the two, thus feeding your grass with a quick boost from the nitrate form, then following with a more sustained release from the ammonium form. Don't get too hung up on the terms; just make sure your fertilizer is a blend of both.

Understanding the Numbers

Obviously, the higher the number, the more of that component in the analysis. An "N" form widely used in agriculture, for example is 46-0-0, or in other words 46 percent of the weight of fertilizer is pure nitrogen. Farmers apply "N" in pounds per acre, (or kilos per hectare), so they would know that 1,000 lbs of 46-0-0 would contain 460 lbs of actual N. As they always apply a specific amount of "actual N" per acre or hectare, it becomes very easy to figure out how much of the actual product to apply.

You too can make this calculation very easily once you understand the numbers.

Understanding the basics

I think the average homeowner looking for that lush green healthy lawn really only needs to remember that the nitrogen component is what brings on the rapid growth and the vivid green color in lawns, but it comes in two forms and you need both. Being a strong growth promoter, nitrogen can also be "hot" if you overdo it and apply too much, and it will actually "burn" the grass. "More is better" does not necessarily apply here.

Understanding the balance

All plants need a balance of all three elements, as each delivers its own unique component in the building block of growth, so let's look at the next element.

Phosphorus, the "P" in the N-P-K, and always the second number

Another essential element, phosphorus, sometimes called phosphate, is the piece of the plant growth puzzle that is essential in promoting a healthy root development in your lawn. Usually a lower number than the N, phosphorus occurs naturally in the soil, but is in a form that is not readily available to the plant's feeding system, thus the need to apply an additional amount each year.

Did you know that phosphorus is mined from the soil and is usually the result of Mother Nature and time converting bird droppings into a "phosphate rock" that we mine? The rock in its natural form will not release to the soil any tangible amount of the P plants need; however, when reacted chemically, it converts to a form more readily available to plants.

Central Florida has huge deposits of phosphate rock, the result of bird droppings on an ocean floor many thousands of years ago. Indeed there is an island in the Pacific, Nauru, that is almost entirely formed from "guano" or bird droppings. Nauru has almost disappeared, as the entire island has been mined in our quest for phosphorus.

Remember the balance

Due to the fact that phosphorus is naturally occurring in the soil and relatively slow to be taken up by plants, many areas have become quite saturated with P, and there is the concern of a possibility of runoff entering our streams and waterways, thus being quite threatening to water life. Indeed, many municipalities are legislating a ban on phosphorus use, or at least requiring a mandatory soil test to determine the correct application levels.

However, as the second number, phosphorus is usually the lower one, and most manufacturers will sell a blend that is in the correct proportion to the other elements, so there is little concern if it's used correctly.

Now to the third element - Potassium

Potassium, the "K" in the N-P-K, and always the third number

The third in the three essential elements is the "K," or potassium, also known as potash. Like phosphate, potash is a naturally occurring rock found in many parts of the world, mainly the Northern Hemisphere, with huge deposits in Canada and Russia. Potash is generally mined in traditional deep underground mines and is an element that is widely used in agriculture in most parts of the world.

Potassium enables the plant to better utilize nitrogen, as well as assisting in the synthesis of many plant processes. A further related benefit is a lawn grown with adequate levels of potassium will have superior tolerance to many turf diseases.

Some soils are naturally blessed with relatively high levels of potassium, but most are not, so as a rule of thumb it's quite safe to apply potassium to all lawns. Unlike phosphorus, a buildup of potash should have no undesirable effects, such as leaching or runoff. Indeed, potash rock is actually a salt that is liberally used in many "ice melt" products and is a key component in the ice melting sand mix used by our highways departments in northern climes.

Again, remember the balance

Just like the first two numbers in the N-P-K, potassium is an important component when used in the right balance. Most lawn fertilizer manufacturers will have done their research on a variety of suitable N-P-K blends that will be adequate for most lawns.

A good rule of thumb is to apply a blend with a higher nitrogen component early in the spring, as you'll want the grass to "pop" and develop that healthy lush dark green color.

As the summer develops, an additional mix with a lower N component but a higher P and K number will be beneficial for healthy root development to carry the plant through the drier summer months.

Closer to fall and the onset of winter, you'll be looking for minimal "growth" but enhanced root development to properly winterize the plant. At this time you'll be needing a very low N number, but a much higher P & K.

Just what is this soluble fertilizer?

Water soluble fertilizers are similar to the granular forms in that they too contain the three essential nutrients, nitrogen, phosphorus and potassium (N-P-K), but they are designed to be dissolved in water prior to application. Additionally, they are often produced with other nonessential but nice to have micronutrients, such as iron, manganese, zinc, copper, boron and molybdenum already blended. I'm not too concerned about understanding what every micronutrient does, as I have faith that commercial soluble fertilizer from reputable companies has already had the appropriate nutrient blended in the right proportions. I use the [Miracle-Gro](#) product line exclusively and love it.

Water soluble fertilizers come in either a dry formulation, kind of a crystal usually, or as a liquid concentrate. They're usually a little more expensive, but certainly they're a lot more convenient to use. I prefer the dry formulation, applied with a hose-end sprayer or a watering can; thus they are easy to apply and provide even feeding.

One key advantage of using a soluble fertilizer, especially on container plants, is that plants will not only take in the nutrients through the soil, but also through their foliage. Being a solution, the nutrients are available to the plant immediately. However, perhaps a downside is that because of their solubility, their nutrients leach through the root zone more rapidly.

There is no risk of burning a plant as long as you follow label directions for dilution, but they are less practical than the solid fertilizer types for large-scale use because of their greater cost, and because of their leaching they must be reapplied more often.

Don't get too concerned with a fertilizer's "solubility" rating. It's simply a measurement of the components' ability to dissolve in given amount of water. For the home gardener that's really useless information, as in reality all commercially available soluble fertilizer is designed to be easy to use.

Final Thoughts

Five simple little ideas, yet oh so effective!

Sure, this barely touches on the concept of "going green" in your garden, but my hope is that it triggers a questioning of what is possible.

Whether you're practical like me, or a purist like Herb, I think we can all agree that less is more when it comes to watering, fertilizing and spraying. Conversely, more is less when it comes to recycling!

More understanding of what's possible usually means you're putting less into your soils.

You too can help reduce our dependency on fertilizers and weed sprays, keep stuff out of the landfills, and do your part in conserving water, possibly our most precious and endangered resource.

This old fertilizer salesman encourages you to do your part!

I hope you've enjoyed my book, **Almost Organic: Green Gardening Tips for the Practical Gardener**, and I'd sure appreciate it if you could take the time to leave an honest review on Amazon. Book reviews help other folks decide if they'd enjoy a book, plus your feedback is invaluable when I'm developing new work.

Let's keep you up to date! Things change at times, and often I'll discover new ideas. Thanks to ebooks, it's really simple to make changes and keep you up to date. If you want to stay abreast of changes and get these updates FREE, then please just sign in at <http://gardenerdon.com/keep-in-touch>